Applied Physics 2018 vol.2018-January N4, pages 106-110

Evaluation of the influence of the properties of composite materials on the parameters of bolted connections of parts

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Abstract

© 2018 Federal Informational-Analytical Center of the Defense Industry. All rights reserved. Consideration is given to the calculating methods of the parts ductility at the bolting spots subject to properties of the isotropic composites of which the parts are made. The authors describe the justification of the calculation of the compliances of the parts. Applied cases of uniaxial and multiaxial stress states were obtained for different composite materials. The methods for calculation of external loads depending on the properties of materials are developed The recommendations about the selecting of the sizes and shapes of the designed junctions of the composite parts were given.

Keywords

Carbon fiber composite, External load factor, Fastening strength of the parts mad of nanomaterials, Fibreglass, Give details of composite material, Physical properties of the elastomers, The calculation of screw connections

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